

REMARKS

Reconsideration of the present application in view of the claim amendments made in the Amendment filed on September 26, 2002, entry of which has been requested in the Request for Continued Examination filed concurrently herewith, as well as the claim amendments and new claims presented herein, is respectfully requested.

Applicant respectfully reminds the examiner to consider for the record and initial the reference US Patent No. 4,962,340 submitted with the IDS originally filed with the present application and to return an initialed copy of the form PTO-1449 resubmitted with the Request for Return of Initialed Form PTO-1449 filed on Sept. 26, 2002.

Subsequent to claims 1-6 and 14 being canceled above, claims 7-13 and 15-18, remain pending, with claims 7 and 10-13 being amended herein, and new dependent claims 15-18 being added.

As recited in amended claim 7, a pressing member (15) is provided between a pinion (6) and a step (5b) of a pinion shaft (5). The step (5b) receives both a rear end surface (6a) of the pinion (6) and an end of the pressing member (15) when the pinion (6) meshes with a ring gear. Also, as recited in amended claim 10, the step of the pinion shaft (5) has a rising wall (5b). The rear end surface (6a) of the pinion (6) and the end of the pressing member (15) are received on the same surface of the step (5b).

Regarding newly added claims, as recited in claim 15, the pinion (6) forms a chamber on an inner periphery of its rear end portion. A part of the rear end surface (6a) of the pinion, which corresponds to the outer periphery of the chamber, protrudes toward the step (5b) and forms the chamber in the inner periphery. The pressing member (15) is housed in the chamber. The protruding rear end surface (6a) is brought into contact with the step (5b) when the pinion (6)

meshes with a ring gear. In this configuration, the pinion (6) has a predetermined axial length. Therefore, the outer periphery of the pinion (6), which has teeth to be engaged with the ring gear, can maintain a predetermined axial length. Also, the inner periphery of the pinion that connects with the pinion shaft (5) can have an adequate axial length. Further, as recited in claim 17, the pinion (6) is connected to the pinion shaft (5) through splines. Accordingly, it is less likely that the pinion (6) will incline when meshing with the ring gear.

As recited in claim 16, the pressing member (15) includes a spring. A front end of the spring is in contact with an inner peripheral wall of the pinion, which defines the chamber, and a rear end of the spring is contact with the step (5b). the pressing member (15) presses the pinion (6) toward a restricting member (12).

Accordingly, the step (5b) restricts axial movement of the pinion (6) while holding the end of the pressing member (15). As a result, it is less likely that the pressing member (15) will be pressed with an excessive amount of force. Therefore, the life of the pressing member is increased. Further, inclination of the pinion (6) is suppressed by the step (5b).

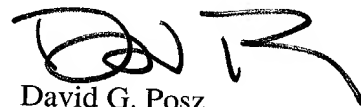
In Shuzo (JP 63-905665, USP 5,081,874), a spring is provided between a pinion (20) and a shaft (17). Although an end of the spring is received on a step of the shaft, a rear end of the pinion is not brought into contact with the step. Therefore, if the pinion is excessively pressed backward when it meshes with the ring gear, the spring may be excessively compressed. That is, the step does not restrict contraction of the spring, and may therefore shorten the life of the spring. Further, it may be difficult to suppress inclination of the pinion with the step.

None of the references (Shuzo, Tajima) teaches or suggests restricting axial movement of the pinion and contracting the spring on the same step. Therefore, as the claimed invention is not obvious in view of the cited combination of references, Applicant requests that the Examiner withdraw the rejection of claims 7-13 and allow these claims as well as new claims 15-18.

In view of the above remarks and claim amendments, Applicant asserts that the present application is now in condition for allowance, and respectfully requests a Notice to that effect.

A Petition for a three-month extension of time is being submitted herewith along with a check for the requisite filing fee. Please charge any additional necessary fees to Deposit Account No. 50-1147.

Respectfully submitted,



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